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PATENT COOPERATION TREATY

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PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 11276p	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)								
International application No.	International filing date (day/month/year) Priority		Priority date (day/month/year)						
PCT/DE2003/000969	24 March 2003 (24.03	3.2003)	22 March 2002 (22.03.2002)						
International Patent Classification (IPC) or national classification and IPC H04B 10/158									
Applicant MELEXIS GMBH									
 This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36. 									
2. This REPORT consists of a total of5 sheets, including this cover sheet.									
This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).									
These annexes consist of a total of sheets.									
3. This report contains indications rela	iting to the following items:								
I Basis of the report									
II Priority									
	of opinion with regard to novelt	y, inventive st	ep and industrial applicability						
Table of miles of in-			,						
IV Lack of unity of invention V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement									
VI Certain documents cited									
VII Certain defects in t	he international application								
VIII Certain observations on the international application									
Date of submission of the demand	Date c	Date of completion of this report							
25 September 2003 (25.09.2003)		09	June 2004 (09.06.2004)						
Name and mailing address of the IPEA/EP	Autho	Authorized officer							
Facsimile No.		Telephone No.							

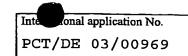


International application No.

PCT/DE2003/000969

	I. Basis of the report							
1. With		o the elements of the international application:*	_					
	the inter	ernational application as originally filed						
\boxtimes	the desc	cription:						
_	pages	, as originally filed	Ŀ					
	pages	, filed with the demand	d					
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K	pages	, as originally filed	4					
	pages _	, as amended (together with any statement under Article 19						
	pages _	, as amended (together with any statement which rather 19						
	pages _	1-15 , filed with the letter of 12 May 2004 (12.05.2004)	•					
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	pages _	,,						
	pages _	, filed with the demand, filed with the demand						
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		nce listing part of the description:						
	pages _	, as originally filed						
	pages _	, filed with the demand						
	pages _	, filed with the letter of						
ine i	se elements	o the language, all the elements marked above were available or furnished to this Authority in the language in which all application was filed, unless otherwise indicated under this item. ts were available or furnished to this Authority in the following language which is:						
		guage of a translation furnished for the purposes of international search (under Rule 23.1(b)).						
		guage of publication of the international application (under Rule 48.3(b)).						
	or 55.3).	•						
3. With preli	iminary exa	to any nucleotide and/or amino acid sequence disclosed in the international application, the international xamination was carried out on the basis of the sequence listing:	1					
H		ed in the international application in written form.	•					
		gether with the international application in computer readable form.						
님		ed subsequently to this Authority in written form.						
H		ed subsequently to this Authority in computer readable form.						
	internati	atement that the subsequently furnished written sequence listing does not go beyond the disclosure in the tional application as filed has been furnished.						
	The stat	atement that the information recorded in computer readable form is identical to the written sequence listing has mished.	S					
4.		nendments have resulted in the cancellation of:						
		the description, pages						
		the claims, Nos.						
	L] tr	the drawings, sheets/fig						
5.	This repo	ort has been established as if (some of) the amendments had not been made, since they have been considered to go the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**)					
in in	acement sh is report (70.17).	heets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16) 5					
** Any replacement sheet containing such amendments must be referred to under item I and annexed to this report.								

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v.	Reasoned statement under Article 3 citations and explanations supporting		ovelty, inventive step or industrial applicability	/ ;
1.	Statement			
	Novelty (N)	Claims	1, 3-5, 7-10, 12-15	YES
		Claims		NO
	Inventive step (IS)	Claims	1, 3-5, 7-10, 12-15	YES
		Claims		NO
	Industrial applicability (IA)	Claims	1, 3-5, 7-10, 12-15	_ YES
		Claims		NO

2. Citations and explanations

This report makes reference to the following documents:

D1: US-A1-2002003649

D2: 1996 International Semiconductor Conference. Sinaia,
Romania, 9-12 October 1996, International Semiconductor Conference, New York, IEEE, US (09-10-1996),
2 CONF. 19, pages 31-40

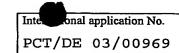
D3: JP(A) 10038683 D4: JP(A) 10164624

1. Document D1 is considered the prior art closest to the subject matter of claim 1. It discloses (the references in parentheses are to figure 2 of D1):

Optical receiver (figure 2) for an optoelectronic circuit (OEIC) essentially consisting of at least one photoreceiver (D1 ... Dn) and at least one transimpedance amplifier (AMP1 ... AMPn),

(i) the photo receiver being divided into a plurality of sub-photodiodes (D1 ... Dn) or consisting of a plurality of individual photodiodes;

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(ii) each sub-photodiode (D1) leading to its own transimpedance amplifier (AMP1) and being electrically condensed in a summing amplifier (AMPs).

from which the subject matter of the claim differs in that

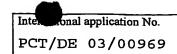
- the optical receiver is a fiber receiver and
- the at least one photoreceiver, the transimpedance amplifier and at least one summing amplifier are monolithically integrated with other circuit components on one chip,
- the diameter of the at least one photoreceiver measuring essentially up to 1 mm.

The problem to be solved by the present invention can thus be seen as that of improving the optical receiver according to D1 in order to reduce costs and enable optical plug connectors to have a greater adjustment tolerance.

The solution proposed in claim 1 of the present application can be considered inventive (PCT Article 33(3)) for the following reasons:

Although document D2 describes the same advantages as the present application with respect to feature a) fiber receiver (see page 35, section V), part a), 1st paragraph) and feature b) monolithic integration (see page 31, section I)), a person skilled in the art would consider the incorporation of these features into the photoreceiver described in D1 to be a conventional measure for solving this part of the problem of interest (see D1, page 1, paragraph 0014).

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The subject matter of the claim relates to the selection of a diameter. The second part of the problem is solved by a selection such as this, which is not explicitly disclosed by any of the cited documents nor can it be considered obvious.

- 2. The same justification applies to independent claim 10. The subject matter of this claim thus involves an inventive step (PCT Article 33(3)).
- 3. Claims 3-5, 7-9 and 12-15 are dependent upon claims 1 and 10 and thus also satisfy the PCT requirements with respect to novelty and inventive step.

Certain defects in the international application

Contrary to the requirements of PCT Rule 5.1(a)(ii), the description does not cite documents D1 and D2 or indicate the relevant prior art disclosed therein.